The 1st International Neuroinflammation Congress and 1st Student Festival of Neurosience

Shefa Neuroscience Research Center, Tehran, Iran, 11-13 April, 2017

The Neuroscience Journal of Shefaye Khatam

Volume 5, No. 2, Suppl 2

Poster Presentation

Omega-3 Fatty Acid and Oxylipins in Management of Alzheimer Disease

Kimia Tarrah*

Student of Research Committee, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Published: ***11 April, 2017***

Abstract

Neurodegenerative disease are characterized by the progressive loss of neurons from specific origins of the CNS .Alzheimer disease (AD) is a neurodegenerative disorder which affect brain regains that control memory and ability to learn. It is estimated that 27 million people are affected word wide and this number is expected to triple by 2050 due to increase of the population life expectancy. AD is becoming one of the most prevalent neurodegenerative conditions worldwide. Although the disease progression is becoming better understood, current medical interventions can only ameliorate some of the symptoms but cannot slow disease progression. Neuroinflammation, a specialized immune response that takes place in the central nervous system, has been linked to neurodegenerative diseases, and specially, it has been considered as a hallmark of Alzheimer disease. It plays an important role in the advancement of this disorder. Omega-3 (n-3) polyunsaturated fatty acids (PUFAs) are involved in both the reduction in and resolution of inflammation. These effects may be mediated by the anti-inflammatory and proresolving effects of bioactive lipid mediators (oxylipins) derived from n–3 PUFAs [eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA)] in fish oil. Epidemiological and animal studies have suggested that dietary fish or fish oil rich in omega-3 fatty acids, (DHA) and (EPA), may have effects in psychiatric and behavioral symptoms in AD. Several studies indicate that Both DHA and EPA can reduce neuroinflammation and cognitive decline, but EPA positively influences mood disorders, whereas DHA maintains normal brain structure. The unique anti-inflammatory and pro-resolving properties of oxylipins from individual n–3 PUFAs will enable the discovery of novel disease-management strategies in AD.

Keywords: Omega-3 fatty acid, Oxylipins, Alzheimer disease

Corresponding Author: Kimia Tarrah

E-mail: *k.tarrah@yahoo.com*

[Downloaded from shefayekhatam.ir on 2026-11-28]